ABSTRACT OF THE DISCLOSURE

The method for horizon binning for an area of interest entails merging an attribute file with a second horizon file, identifying an area of interest of the merged file, identifying a time range for a time horizon file or a depth range for a depth horizon file, to perform the analysis, proposing a

5   theory that the identified area has a portion contiguous between a hydrocarbon and water-bearing area, binning the identified area of interest using a file with time or depth values, computing a calculated value for each bin, creating a plot of the computed value versus the first value for each bin, viewing the plot to ascertain if a magnitude shift corresponds to a fluid contact, using discontinuity of the water and hydrocarbon reservoir models to confirm the theory, and using the

10   discontinuity to determine a boundary between the water and hydrocarbon reservoir model and the corresponding water and hydrocarbon reservoirs for an identified area.